THE UNIVERSITY OF WESTERN ONTARIO
FACULTY OF MEDICINE

DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY
THE HAMILTON KING MEEK MEMORIAL LABORATORY

375 SOUTH STREET,
LONDON, CANADA

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Dr. Joshua Lederberg,
Department of Genetics,
University of Wisconsin,
Madison, Wisconsin.

Dear Josh:

Thank you very much for the always-interesting packet of your reprints. I am particularly glad to have the one on protoplasts and L-type growth.

We have done some work on the effect of penicillin on staphylococcal cell wall growth by studying sections of inhibited cells. There is no doubt that the major "lesion" is in cell wall synthesis and this is expressed as a change, in character and form, of the developing cell wall septa. The peripheral cell wall becomes thinner, presumably due to stretching as the cell swells. In sucrose medium the large forms are quite stable and lyse promptly on dilution of the medium. However, even after 18 hours a cell wall is present. The cell wall would seem to have lost a structural component and is left as an elastic and inefficient corset. Saltons paper in Nature indicates this with more sound chemical evidence on Gram-negative cell wall. Therefore, one can hardly talk of these as protoplasts unless one defines them as being one of several osmotically sensitive derived forms.

You seem to be (or have been) on your travels. I hope it has proved enjoyable and worthwhile. Will we see you in late August?

All the best.

Yours sincerely,

RGEM/avb.

R. G. E. Murray, M.D.

MURRAY, R.G.E.